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ABSTRACT

The study involving 12 learning disabled (LD) junior high school students investigated whether LD students with reading comprehension difficulties were deficient in syntactic abilities as compared to normal students. Syntactic and reading tests were administered to each student. Comparison of the scores between the two groups showed that LD Ss performed more poorly than the normal Ss on all measures. Significant differences occurred on four measures of syntactic abilities--recognition of grammaticality, receptive vocabulary, silent reading comprehension, and silent reading vocabulary. The major hypothesis was confirmed that LD Ss with reading comprehension difficulties were significantly deficient in oral syntax when compared to normal students. (SB)

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Syntactic and Reading Abilities in Normal and Learning Disabled Junior High School Students

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Abstract

The major hypothesis of this investigation was that learning disabled students with reading comprehension difficulties were deficient in syntactic abilities as compared to normal students on the junior high school level. Syntactic information enables the reader to decode words and gain meaning from what is read.

Twelve male students from a junior high school in Omaha, Nebraska participated in the study. The learning disabled group scored one standard deviation or more below the mean on the Gates MacGinitie Reading Tests of Vocabulary and Comprehension, Survey D, Form 1. The normal group scored on the mean or above.

Eight specific measures were selected to assess syntactic and reading ability. The normal group received higher raw scores on all eight measures than did the learning disabled group.

The findings in this study suggest that special attention to syntactic development be a part of reading programs in an effort to reduce the occurrence of syntactic deficits and accompanying reading comprehension problems.

Introduction and Review of the Literature

In the United States today, approximately eight million school-age children have reading problems and are reading one or more years below age or grade norms. In most of these cases, the reader may experience difficulties in phonological, semantic, or syntactic areas.

The relationship between syntactic components of language and reading disability has not received much attention. A few studies provide some support for the possibility that deficiencies in knowledge of syntact may be associated with poor achievement in reading.

In two separate studies, Fry (1967) and Schulte (1967), compared samples of second grade normal and poor readers on measures of expressive language. They found that the normal readers had better speaking vocabularies and greater verbal fluency.

Wiig, Semel, and Crouse (1973) reported differences between normal and poor readers on Berko's (1958) test of morphological usage. The poor readers made significantly more errors than the normal readers on this measure. These findings suggest that poor readers may be significantly delayed in the acquisition of basic morphological generalizations.

Vogel (1974) compared normal and poor readers at the second grade level on a battery of nine measures of oral syntax. Poor readers were found to be inferior on seven of the nine measures.

In summary, poor readers had less capability than normal readers on knowledge of syntax, word meaning and verbal fluency. Since most of these findings were derived from contrasts of normal and poor readers at an early age of development in reading, it may be suggested that syntactic and reading difficulties persist up through the higher grade levels.

Method

Subjects

The sample for the study was drawn from the seventh grade reading class at a junior high school in Omaha, Nebraska. The sample consisted of two groups of six students each: learning disabled and normal students. All twelve students were Caucasian males ranging in age from twelve years, one month to thirteen years, three months. They all had seven years of previous schooling. All the students had monolingual language backgrounds, average intelligence and receptive vocabulary, and adequate visual and auditory acuity.

The Gates MacGinitie Reading Tests of Vocabulary and Comprehension, Survey D, Form 1, were administered to all students. The learning disabled group scored one standard deviation or more below the mean. Those students who scored in the 50th percentile or above comprised the normal group.

Procedure

Syntactic and reading tests were administered to each student. The measures selected to assess syntactic and reading abilities are presented in Table 1.

Results and Discussion

The means, standard deviations, and ranges of the two sample groups on the seven syntactic and reading measures are reported in Table 2. A comparison of the scores between the two groups showed that the learning disabled performed more poorly than the normal students on all measures.

To answer the question as to whether learning disabled students are significantly different in syntactic abilities from normal students, an analysis of variance was computed between both sample groups on seven of the eight measures (excluding oral reading of paragraphs). On four of the seven measures the difference between the two sample groups was significant at the 0.05 level, based on the univariate F tests. These four measures included the recognition of grammaticality, receptive vocabulary, silent reading comprehension, and silent reading vocabulary. There was no significant differences between the groups on the auditory memory for sentences, the oral reading of single words, and the oral reading of nonsense words (Table 3). Low reliability of the measures in these categories where there was no significant difference, (although it was not computed) may have contributed to their failure to demonstrate significant difference between the two groups.

The results of the oral reading of paragraphs were analyzed in order to compare reading ability and comprehension between the groups. The average instructional level was calculated. For the normal readers the average instructional level was 7.8 (seventh grade, eighth month) while that level turned out to be 5.2 (fifth grade, second month) for the learning disabled readers. These findings demonstrated that the normal group had satisfactory comprehension for their age and grade level. Learning disabled students revealed poor comprehension, thus being one or more years below grade level.

The major hypothesis of the present investigation was confirmed. Learning disabled students with reading comprehension difficulties were found to be significantly deficient in oral syntax when compared with normal students on the junior high school level. It is suggested that this discrepancy in syntax and reading abilities between the groups may be a result of the inability of the learning disabled students to use efficiently the semantic information they possess because of their syntactic deficiencies.

It is important that special attention to syntactic development be part of reading readiness programs for all children in an effort to reduce the occurrence of syntactic deficits. It is also imperative to recognize this difficulty through evaluation and diagnostic procedures, in order for appropriate remediation techniques to be employed. Thus, it seems that learning disabled students who experience reading comprehension difficulties also have accompanying syntactic deficiencies.

Table 1. Summary of Measures Used

Test Title	Source	Score
Recognition of Grammaticality	Experimental	Raw Score
Auditory Memory for Sentences	Detroit Tests of Learning Aptitude, Auditory Attention Span for Related Syllables; Baker and Leland, 1959	Raw Score
Receptive Vocabulary	Peabody Picture Vocabulary Test; Dunn, 1965	Raw Score
Silent Reading Comprehension	Gates-MacGinitie Reading Tests, Survey E; Gates and MacGinitie, 1965	Raw Score
Silent Reading Vocabulary	Gates-MacGinitie Reading Tests, Survey E; Gates and MacGinitie, 1965	Raw Score
Oral Reading of Single Words	Slosson Oral Reading Test; Slosson, 1963	Raw Score
Oral Reading of Nonsense Words	Woodcock Reading Mastery Tests; Woodcock, 1973	Raw Score
Oral Reading of Paragraphs	Houghton-Mifflin Pupil Placement Tests; Hollander and Reisman, 1970	Raw Score

Table 2. Means, Standard Deviations, and Ranges of Syntactic and Reading Measures

Measure	Group	Mean	SD	Range
Recognition of Grammaticality	Normal	18.67	1.88	15 - 21
	Learning Disabled	15.00	2.30	12 - 18
Auditory Memory for Sentences	Normal	82.83	7.85	72 - 93
	Learning Disabled	70.83	16.51	45 - 93
Receptive Vocabulary	Normal	102.83	7.12	94-116
	Learning Disabled	88.83	9.11	82-108
Silent Reading Comprehension	Normal	41.67	1.15	39 - 43
	Learning Disabled	20.33	2.73	16 - 22
Silent Reading Vocabulary	Normal	23.67	1.69	22 - 26
	Learning Disabled	15.00	2.41	12 - 22
Oral Reading of Single Words	Normal	181.33	19.51	140-200
	Learning Disabled	143.33	26.69	108-174
Oral Reading of Nonsense Words	Normal	44.50	1.77	35 - 48
	Learning Disabled	37.33	6.87	30 - 50

Table 3. Univariate F Tests of Significance Between the Two Sample Groups on the Syntactic and Reading Measures

Measure	F (1,10)	*MS	p less than
Recognition of Grammaticality	7.59	40.44 5.328	0.05
Auditory Memory for Sentences	2.22	432.00 194.356	Not Significant
Receptive Vocabulary	7.32	80.37 588.00	0.05
Silent Reading Comprehension	348.34	1364.82 3.918	0.05
Silent Reading Vocabulary	36.45	224.88 61.88	0.05
Oral Reading of Single Words	4.68	4331.99 926.389	Not Significant
Oral Reading of Nonsense Words	3.88	154.14 39.678	Not Significant

*The two scores under MS refer to the MS between groups (top number) and MS within groups (bottom number)

APPENDIX A

Test of Recognition of Grammaticality

1. Mother has taken me swimming already.
2. Was you there last week?
3. He doesn't like these kind of apples.
4. This is the worst storm we have had in ten years.
5. Will you stay with Betty and I?
6. Having teached my dog a trick, I gave him a dog biscuit.
7. The least I sleep, the more tired I will be.
8. Yes I see the dress is tore, but I can fix it.
9. It's a miracle that he didn't hurt himself.
10. He sat so quietly I thought he was asleep.
11. The boy have completed his work.
12. Did the late bell rang yet?
13. Be sure the bottle don't fall off the counter.
14. The kitten had fallen into the old well.
15. Didn't either of them see what happened?
16. The lady which I interviewed is a waitress.
17. Is these the records you bought yesterday?
18. The rope what was badly worn soon broke.
19. He had already chosen Bill for his team.
20. We have not yet swam in an outdoor pool.
21. The dog ran faster that I'd ever saw him run.
22. I did well enough to earn my badge.
23. It was lucky that they didn't cut theirselves.
24. Can't you see no difference between the two?

BIBLIOGRAPHY

Baker, H. and B. Leland, Detroit Tests of Learning Aptitude. Indianapolis: Test Division of Bobbs-Merrill, 1959.

Benton, P., Dyslexia. New York: Oxford University Press, 1978.

Dunn, L., Peabody Picture Vocabulary Test. Circle Pines: American Guidance Service, 1965.

Gates, A. and W. MacGinitie, Gates-MacGinitie Reading Tests. New York: Teachers College Press, 1965.

Hollander, Sheila K. and Marian Reisman, Pupil Placement Tests. New York: Houghton Mifflin Company, 1970.

Roswell, Florence G. and Gladys Natchez, Reading Disability. New York: Basic Book, Inc., 1977.

Slosson, Richard L., Slosson Oral Reading Test. East Aurora: Slosson Educational Publications, 1963.

Vogel, Susan A., Syntactic Abilities in Normal and Dyslexic Children. Baltimore: University Park Press, 1975.

Wagner, Rudolph F., Dyslexia and Your Child. New York: Harper and Row Publishers, 1971.

Wiig, Elizabeth H. and Eleanor M. Semel, "Comparison of Syntactic Structures and Critical Verbal Elements by Children with Learning Disabilities," Journal of Learning Disabilities. Vol. 8 (Jan. 1975), p. 53.

Wiig, Elizabeth H. and Eleanor M. Semel, Language Disabilities in Children and Adolescents. Columbus: Charles E. Merrill Publishing Co., 1976.

Williams, Jessie F., Children with Specific Learning Difficulties. New York: Pergamon Press, 1974.

Woodcock, Richard W., Woodcock Reading Mastery Tests. Circle Pines: American Guidance Service Inc., 1973.